Review: Engaging New Technologies?

Reviewed Work(s): Artificial Knowing: Gender and the Thinking Machine by Alison Adam: Processed Lives: Gender and Technology in Everyday Life by Jennifer Terry and Melodie Calvert

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EXTENDED REVIEW
Engaging New Technologies?

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Alison Adam, *Artificial Knowing: Gender and the Thinking Machine,* London: Routledge, 1998, £45.00, paper £13.99, 216 pp.
Jennifer Terry and Melodie Calvert (eds), *Processed Lives: Gender and Technology in Everyday Life,* London: Routledge, 1997, £45.00, paper £14.99, 264 pp.

Feminist research can be characterised by the key question which its practitioners habitually ask: 'Who is doing what to whom here?' By asking this provocative question, and by thinking through the answers, feminist researchers have been able to make the tacit, often taken-for-granted structuring work done through gender into a visible phenomenon open to discussion. In this way, feminist thinking has been able to make strategic and principled interventions in a number of apparently gender-neutral fields, doing much to expose exclusionary and inequable practices both historically and in the present. In recent years, a particularly sharp focus has been placed on science and technology. These fields have a special strategic significance for feminists. On the one hand, work in scientific and technical fields has traditionally been viewed as a masculine pursuit, to which women were not well suited. On the other hand, the knowledges and artefacts produced by science and technology have often been claimed as neutral products of an objective quest. Science and technology therefore exemplify the double trick through which a hierarchical gendered structure is at the same time imposed and denied. By showing that the work of science and technology development is thoroughly gendered, it has been possible to highlight the means by which sanctioned and valued ways of doing and knowing, which may seem natural or normal, can mask systematic exclusions and biases. The task is to make visible and valorise alternative ways of doing and knowing, and to reveal the practices through which they are excluded. The constant tension which runs through this work, however, is to avoid closing down opportunities for change. An argument which is structured along gender lines runs the risk of homogenising and essentialising both masculine and feminine, and naturalising the categories which it sets out to question.

One highly provocative and effective strategy for over-coming this tension is to employ a critical engagement with the field of work in question. This raises the possibility of simultaneously exposing exclusions and denying their naturalness, rather than concretising them through critique from the outside. This approach is exemplified by Alison Adam in her critique of Artificial Intelligence research. Adam seeks to argue that the work of producing Artificial Intelligence systems is thoroughly gendered in the ways in which it selects and represents certain forms of knowledge as exemplars of human knowing. The classic feminist question is transformed to ask 'Who knows what about whom, and how?' The knowledge embedded in Artificial Intelligence systems is largely of the propositional form '*s* knows that *p*'. Adam marshals feminist epistemology to suggest that it matters who can be *s* and what can be *p*. Starting from a perspective that there are other ways of knowing than those sanctioned by mainstream rationalist epistemology, alternative models have been posited which focus on situatedness and plurality, rather than

objective detachment and singularity. Feminist epistemology focuses on a knowledge which is based on location and connection, and which is therefore inherently plural in its perspective. It is suggested that into Artificial Intelligence machines, often conceived of as models for human intelligence, particular gendered kinds of knowledge are being inscribed. This is an important contribution to critiques of Artificial Intelligence, which have noted the asocial view of human intelligence enacted by its designers, but not hitherto seen this in the light of gender relations. Adam also makes a significant contribution to feminist epistemology by applying it to a field of practice in a way that makes clear its implications for the kinds of object which are produced.

Adam has a practical engagement with the technology she criticises. Through her history of involvement in Artificial Intelligence projects and in her encouragement of projects aimed at integrating feminist thinking with the design of expert systems, she makes a practical contribution to the field and demonstrates ways in which it could be otherwise. Preliminary and exploratory though they might be, the experiments with feminist-informed Artificial Intelligence which Adam describes towards the end of the book provide a glimpse of an alternative practice producing alternative technologies. Their very modesty is a refreshing contrast to the grandiose projects which she describes in the rest of the book. Adam focuses on a technology which exists largely in the research domain. This enables her to tell a story of the ways in which gender is inscribed in the technology, but leaves out the practices through which these inscriptions may be read. Her solution lies in the development of systems into which more diverse forms of knowledge can be inscribed. This focus does, however, leave some questions unanswered for a theoretical approach to gender-technology relations. The problem is whether politics or ideologies can be inscribed into technologies in ways that affect or determine the actions of the ultimate users of those technologies. When the site of gendering is placed in the design and production phase, users can come to be seen as the victims of a positioning wished on them through a prior process. This formulation, however, underplays the creativity of interpretation and appropriation, and places a high regard on the ability of technologies to carry the ideologies of designers intact to users. What would users of the Cyc and Soar systems described by Adam be able to make of them? Would they read them as gendered? The authors of *Processed Lives* focus on the use-context of technologies, and are able to make that seem a far more complex, creative process than it might appear if we focus only on production.

Terry and Calvert have assembled a diverse array of authors and artists to consider the gendering of the new information, communication and reproductive technologies in use. As with Adam's book, this collection is notable for the active engagement which its authors develop with the technologies. Self-examination is combined with interrogation of the technologies and the social relations which surround and define them in a series of short contributions which are variously optimistic, ambivalent, pessimistic, academically argued, artistically expressed, prescriptive and descriptive. Some contributions based on audio-visual presentations are less successful in print form, in that they give only a glimpse of the complexity of the original. They are, however, valuable in that they provoke reflection and make space for the reader to insert their own interpretations. Whilst Adam argues for the recognition of alternative ways of knowing, the collected authors in *Processed Lives* exemplify that diversity. The authors also demonstrate that, however gendered the production of technologies may be, this is not necessarily experienced as an end point or a closing down of opportunities for reinventing the technology in use. In their creative engagements with the technologies they both question existing uses and provoke consideration of alternatives. At the same time,

however, they recognise that technologies are experienced through gendered sets of social relations. Hence, the promise of technological fantasies like cyberspace to eradicate or transcend gendering miss out on the thoroughly social circumstances of their interpretation and use. Both technophilia and technophobia are suspect, since both place too high a trust in the capacity of the technology alone to have effects.

The question of the relationship between the design of technologies and their use is key not just for feminist approaches, but for the sociology of technology more broadly. A similar question also preoccupies media studies, where the focus is on the ideological messages which may be carried through the media for audience consumption. In each case the question remains whether the assumptions of designers that are embedded in material (or informational) forms have effects on the users of those products. There is a long way yet to go in understanding this relationship, and the particular sets of social relations which surround production and use may provide very different answers in different settings. The feminist approach, however, makes this theoretical problem also a pressing strategic and political one. Feminists are understandably suspicious of 'Women Into . . .' approaches, which suggest that gender issues can be dealt with by encouraging more women to enter fields where they are under-represented. Whilst this might be some of the answer, it is of little help if the work itself is unchanged and the new entrants are left little option but to adapt. Adam suggests that new designers of Artificial Intelligence systems need to be supported in different ways of thinking. The authors of *Processed Lives* suggest that relationships with technology are messy and puzzling, and are woven into lives in complex ways. The users of new technologies, too, may need support in finding alternative ways to think about them. Engagement with the technologies that are criticised helps to avoid being boxed into an end point where the world is gendered in straightforward ways. Both books reviewed here provide active examples which revalue and reposition different kinds of knowing and doing. In the process, they form part of the important ongoing work of challenging and redefining taken-for-granted boundaries of masculine/feminine, nature/culture and social/technical.

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